

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-201722

(43)Date of publication of application : 25.07.2000

(51)Int.Cl.

A45D 19/00

(21)Application number : 11-008399

(71)Applicant : KANEBO LTD

(22)Date of filing : 14.01.1999

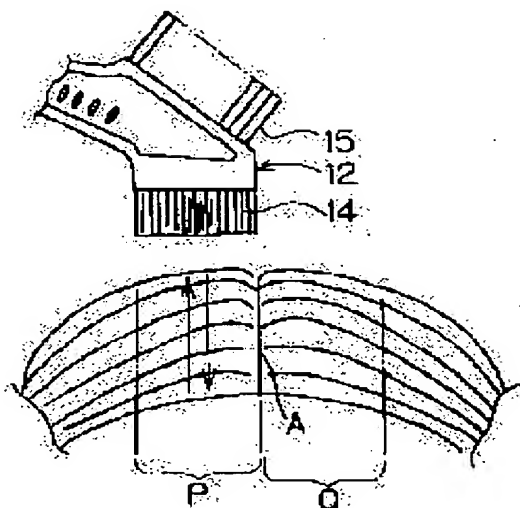
(72)Inventor : TAKIZAWA SABURO
HAMADA TOMOMI
FUTAGAWA YOSHIKO
MIWA SAWAKA

(54) METHOD OF APPLYING HAIR-DYE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a method of applying a hair-dye for applying a hair-dye quickly and evenly to the hair with simple motions.

SOLUTION: First, a parting line A is made in the hair, and bristles 14 holding a hair-dye are applied to the hair so that the longitudinal direction of the bristle line is along the hair stream in the parting line A. Under that condition, the bristles 14 are moved forward and backward crossing the hair stream so that the hair-dye is applied to the hair in almost the same width as of the longitudinal direction of the bristle line. Then another parting line is made in a position apart from the area of the hair where the hair-dye has been already applied, and the same series of hair-dye application processes are made so that the hair-dye is applied to the hair only in the width of the longitudinal direction of the bristle line without gap with the area where the hair-dye has been previously applied. Thereafter, the same processes are repeated.



LEGAL STATUS

[Date of request for examination] 06.03.2001

[Date of sending the examiner's decision of rejection] 01.04.2003

[Kind of final disposal of application other than the
examiner's decision of rejection or application
converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of
rejection] 2003-07453[Date of requesting appeal against examiner's decision
of rejection] 01.05.2003

BEST AVAILABLE COPY

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office

*** NOTICES ***

JPO and NCIP are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] Are the approach of giving a hair coloring agent to hair using the brush hair implanted in seriate, and first, build the line to hair and it sets on the parting. The brush hair holding the above-mentioned hair coloring agent is applied to hair so that the longitudinal direction of brush **** may meet in the direction in which the hair in the above-mentioned line flows. Only the same width of face applies a hair coloring agent to hair. the flow of hair is crossed for brush hair in the condition -- as -- order -- moving -- the width of face of the longitudinal direction of brush ****, and abbreviation -- Build the new line in the location [field / where the above-mentioned hair coloring agent was applied] next shifted, and it sets on the parting. the field where the hair coloring agent was previously applied by performing hair coloring agent application actuation of a top Norikazu ream, and a clearance -- there is nothing -- the width of face of the longitudinal direction of brush ****, and abbreviation -- the hair coloring agent grant approach characterized by only for the same width of face applying a hair coloring agent to hair, and repeating the same actuation hereafter.

[Claim 2] The hair coloring agent grant approach according to claim 1 which is that to which the above-mentioned hair coloring agent grant is performed to the root of the canities extended newly.

[Translation done.]

* NOTICES *

JPO and NCIP are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the approach of giving a hair coloring agent to hair for the purpose of a hair dye etc.

[0002]

[Description of the Prior Art] From the former, dyeing hair using a paste-like hair coloring agent is performed at the beauty shop or the home. As the above-mentioned hair coloring agent, the thing of 2 agent mixing type which consists of the 1st agent and the 2nd agent is usually used, these two ** are mixed just before use, and hair is dyed by that chemical reaction. Therefore, while the above-mentioned chemical reaction has occurred, it becomes the important point to give the mixed hair coloring agent quickly to homogeneity to hair, when obtaining a good result.

[0003] Then, at the home, even if it is the case where an amateur performs hair coloring by the self, the hair coloring tools of dedication are sold by the above-mentioned hair coloring agent and the set so that it may be quick and a hair coloring agent can be given to homogeneity at hair.

[0004] As the above-mentioned hair coloring tools, as shown in drawing 8 , the brush hair 2 is implanted in seriate at one end face of the brush rest 1, and that by which the ctenidium-like bristle 3 was really formed in the other-end side by seriate is used widely.

[0005] In order to perform hair coloring using these hair coloring tools First, build line A with projection 4a prepared for root Motobe, a pedicel 4, to hair, and in one side of this line A, the seriate brush hair 2 so that that longitudinal direction may become parallel to line A That is, as it guesses so that the brush hair 2 may cross the direction where hair flows, and an arrow head shows, it repeats making it move in accordance with the flow of hair as it is 2 to 3 times, and a hair coloring agent is applied to the root side of hair. Moreover, the same activity is done also in the opposite side of line A. Next, the line is newly built in the location [A / above-mentioned line] shifted, and the same activity as the above is done. And after applying a hair coloring agent throughout the root side of hair, a pedicel 4 is reversed, it is a bristle 3, hair is combed lightly, the hair coloring agent applied to the root side is lengthened to a hair-ends side, and a hair coloring agent is made to die and cross to homogeneity shortly. Thus, hair coloring can be performed.

[0006]

[Problem(s) to be Solved by the Invention] However, by the above-mentioned approach, in order to move the brush hair 2 in accordance with the flow of hair, it is hard to grasp to which point of hair the hair coloring agent was applied, and there is a problem that spreading of a hair coloring agent tends to become an ununiformity. Moreover, in order that resistance may not cut in the remainder to a motion of the brush hair 2, the problem of being hard to enter from a hair front face to the inside of hair also has the hair coloring agent applied with the brush hair 2.

[0007] This invention was made in view of such a situation, is easy actuation and sets quickly offer of the hair coloring agent grant approach which can give a hair coloring agent at homogeneity to hair as the purpose.

[0008]

[Means for Solving the Problem] In order to attain the above-mentioned purpose, this invention is the approach of giving a hair coloring agent to hair using the brush hair implanted in seriate, first, builds the line to hair and sets it on the parting. The brush hair holding the above-mentioned hair coloring agent is applied to hair so that the longitudinal direction of brush **** may meet in the direction in which the hair in the above-mentioned line flows. Only the same width of face applies a hair coloring agent to hair. the flow of hair is crossed for brush hair

in the condition -- as -- order -- moving -- the width of face of the longitudinal direction of brush ****, and abbreviation -- Build the new line in the location [field / where the above-mentioned hair coloring agent was applied] next shifted, and it sets on the parting. the field where the hair coloring agent was previously applied by performing hair coloring agent application actuation of a top Norikazu ream, and a clearance -- there is nothing -- the width of face of the longitudinal direction of brush ****, and abbreviation -- only the same width of face applies a hair coloring agent to hair, and let hereafter the hair coloring agent grant approach which repeats the same actuation be the 1st summary.

[0009] Moreover, let that to which hair coloring agent grant is especially performed to the root of the canities extended newly also in the above-mentioned hair coloring agent grant approach be the 2nd summary.

[0010]

[Embodiment of the Invention] Below, the gestalt of operation of this invention is explained.

[0011] Drawing 1 is the hair coloring set of a lot used for the gestalt of 1 operation of this invention, and these are sold by the bundle as goods of a home hair coloring agent. In drawing, the hair coloring agent put into 10 by the tube container with respectively separate the 1st agent and the 2nd agent and 11 are the trays made from plastics for mixing the above-mentioned hair coloring agent 10. Moreover, 12 is the hair coloring tools of dedication, the brush hair 14 is implanted in end face of one of the two seriate, and the bristle 15 is really formed in the end face of the opposite side seriate. 13 is a vinyl glove.

[0012] In this invention, hair coloring to a part for root Motobe of the canities extended newly can be performed by giving a hair coloring agent as follows to hair, using the above-mentioned hair coloring set. That is, first, as shown in drawing 2, the 1st agent of the hair coloring agent 10 and the 2nd agent are pressed out tales doses every on a tray 11. And a glove 13 is put, and after stopping a wrist with a rubber band so that it may not separate, as shown in drawing 3, it often mixes with the brush hair 14 of the hair coloring tools 12.

[0013] And it applies to hair root Motobe to whom the hair coloring agent (henceforth "a mixed cream") mixed within the tray 11 is taken in the brush hair 14 of the hair coloring tools 12, a hairline is newly extended in it, and canities is conspicuous in it. Next, the above-mentioned mixed cream is applied to root Motobe of the both sides with the brush hair 14 of the hair coloring tools 12 in order focusing on the line in order on the backside [the forelock -> both side -> head], building the line to hair.

[0014] If spreading of the mixed cream to the above-mentioned line is explained in more detail, as shown in drawing 4 (a), line A will be first built to hair using the projection 16 prepared in the point of the shank of the hair coloring tools 12. Next, as shown in this drawing (b), in the above-mentioned line A, the brush hair 14 of the hair coloring tools 12 is applied to hair so that it may meet in the direction in which the hair to which the longitudinal direction of the brush **** extends from line A flows, in the condition, the brush hair 14 is moved forward and backward so that the flow of hair may be crossed, and a mixed cream is applied to root Motobe of line A.

[0015] And as shown in drawing 5, spreading of the mixed cream to root Motobe of the above-mentioned line A presses down first the hair prolonged in one side from line A by hand of one of the two, to the hair of the one side, repeats the brush hair 14 from back 2 or 3 times from before and before to back, moves it, and when only the width of face of the longitudinal direction of brush **** gives a mixed cream to hair, it is performed. Thus, P shows the obtained spreading field. Next, the hair prolonged in the opposite side of the above-mentioned line A is pressed down by hand, the brush hair 14 is similarly moved to this part, and the spreading field Q is obtained. In addition, in spreading actuation of the above-mentioned mixed cream, in order to apply a mixed cream to homogeneous line width, it is important to press down firmly so that the flow of hair may not be confused.

[0016] below, it is shown in drawing 6 -- as -- the width of face of the longitudinal direction of the above-mentioned brush ****, and abbreviation -- the new spreading fields R and S are obtained by building new line A' in the location where only the same die length shifted, and performing the same actuation as the above. In addition, in above-mentioned line A', since the inside part of the spreading field R is a side front part of the spreading field Q formed previously, by shifting the line to A[from A] ' shows that spreading from the side front of hair and spreading from a background can be performed now one by one.

[0017] thus, the width of face of the longitudinal direction of brush **** and abbreviation -- a mixed cream is applied shifting and building every [the same die length] and the line, and a mixed cream is given to root Motobe of the whole hair. And the mixed cream given to root Motobe is lightly lengthened toward hair ends by reversing the pedicel of the hair coloring tools 12, applying a bristle 15 to the head shortly and combing hair. And like the conventional hair coloring after predetermined time progress, a hair coloring agent is flushed, it dries and hair coloring is ended.

[0018] To having moved the brush hair 14 of the hair coloring tools 12 in accordance with the flow of hair

conventionally, it moves forward and backward so that the flow of hair may be crossed, and he is trying to form the spreading field of every [of the longitudinal direction of brush **** / width of face], and a mixed cream according to the above-mentioned hair coloring approach. Therefore, it applies to the same place too much superfluously, partially, it dyes, it does not become a riser or does not become [it dyes without / deep / coverage being insufficient, and] remnants, and certainly and easily, a mixed cream can be applied by fixed width of face, and quick good hair coloring can be realized. And in order that the brush hair 14 may cross the flow of hair, resistance concerning the brush hair 14 is strong, and has the advantage that the mixed cream held at the brush hair 14 is easy to be pushed in to the inside of hair.

[0019] In addition, although the 2 agent mixing type hair coloring agent 10 is used in the above-mentioned example, no matter the class of hair coloring agent 10 may be what thing, there is no inconvenience. And a tray 11 and the glove 13 of what kind of thing is combined how are also arbitrary.

[0020] Moreover, although the hair coloring tools 12 which formed the brush hair 14 and a bristle 15 in the both sides of a pedicel are used in the above-mentioned example, a mixed cream is applied using the hair coloring brush which has only not only this but the brush hair 14, and you may make it lengthen a mixed cream to the whole hair using the hair coloring comb which has only a bristle 15.

[0021] However, it is suitable to use the hair coloring tools 12 with which the brush hair 14 and a bristle 15 were formed in one like the above-mentioned example in respect of user-friendliness. As shown in drawing 7, especially And the plane view abbreviation triangle-like brush rest 20, Side 20b in which it is the hair coloring tools 12 equipped with the pedicel 21 prolonged in the shape of a narrow width from one-side section 20a of this brush rest 20, and the brush hair 14 of the above-mentioned brush rest 20 was formed, It is especially suitable to use what was set up so that the direction where the imaginary line 22 which bisects the angle theta which consists of side 20c in which the bristle 15 was formed is prolonged might carry out abbreviation coincidence with the direction where the above-mentioned pedicel 21 is prolonged.

[0022] That is, since the include angle which the brush **** tip to a pedicel 21 makes, and the include angle which the bristle train tip to a pedicel 21 makes become the same according to the hair coloring tools 12 shown in above-mentioned drawing 7, also when a pedicel 21 is grasped and the brush hair 14 is applied to a head, and also when a bristle 15 is applied, it is not necessary to change the include angle of the pedicel 21 to a head, and it can work, maintaining the same include angle consistently. Therefore, a pedicel 21 is not moved unconsciously and it has the advantage that a hair coloring activity can be done stably.

[0023] In addition, although the die length of the brush hair 14 and a bristle 15, the width of face of the longitudinal direction of a train, etc. can be set up suitably, it is suitable for them to carry out width of face of the longitudinal direction of brush **** before and after 3cm especially also in 2.5-4cm. That is, since it is hard to move where the brush hair 14 whole is put in this invention to hair, when brush **** exceeded 4cm, in order to cross the flow of hair and to move the brush hair 14 forward and backward, and it is hard to meet the curve of the head, it is not desirable. On the contrary, if brush **** is shorter than 2.5cm, since the spreading field of a mixed cream is formed for every width of face of this, it becomes complicated and is not desirable [that time and effort]. Moreover, although the hair dyeing for root Motobe of the canities extended newly (the so-called "retouch") is important in order to dye canities by itself, it is usually in the condition (from the last hair coloring to generally [although there is individual difference] one month after) that 1-1.5cm canities has been extended that canities begins to be conspicuous. It is difficult to be connected with the place dyed last time and to dye it finely, if only 1-1.5cm only of canities parts extended newly is dyed, although this is dyed. Then, it can always dye beautifully in a fixed color by covering the part dyed last time and applying a mixed cream to feeling. It is suitable to set up brush hair queue length before and after 3cm also from this.

[0024] Moreover, although the above-mentioned example is an example which applied this invention to retouch, it is applicable to the whole dyeing which dyes not only this but the whole hair. However, like the above-mentioned example, applying to retouch has the high improvement effectiveness in effectiveness of an activity, and it is suitable.

[0025] And the above-mentioned example applies this invention, when performing hair coloring at home using hair coloring agent goods, but even if it applies this invention to the hair coloring not only in the hair coloring in a home but a beauty shop etc., there is no inconvenience.

[0026]

[Effect of the Invention] as mentioned above, the hair coloring agent grant approach of this invention crosses the flow of hair to having moved conventionally the brush hair which the hair coloring agent attached in accordance with the flow of hair -- as -- order -- moving -- the width of face of the longitudinal direction of

brush ****, and abbreviation — the spreading field of every [the same width of face] and a hair coloring agent is formed. Therefore, it applies to the same place too much superfluously, partially, it dyes, it does not become a riser or does not become [it dyes without / deep / coverage being insufficient, and] remnants, and certainly and easily, a mixed cream can be applied by fixed width of face, and quick good hair coloring can be realized. [0027] And according to this invention, in order that brush hair may cross the flow of hair, resistance concerning brush hair becomes large compared with the case of the former to which brush hair meets the flow of hair, and has the advantage that the mixed cream held at brush hair is easy to be pushed in to the inside of hair.

[Translation done.]

* NOTICES *

JPO and NCIPJ are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

TECHNICAL FIELD

[Field of the Invention] This invention relates to the approach of giving a hair coloring agent to hair for the purpose of a hair dye etc.

[Translation done.]

* NOTICES *

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

PRIOR ART

[Description of the Prior Art] From the former, dyeing hair using a paste-like hair coloring agent is performed at the beauty shop or the home. As the above-mentioned hair coloring agent, the thing of 2 agent mixing type which consists of the 1st agent and the 2nd agent is usually used, these two ** are mixed just before use, and hair is dyed by that chemical reaction. Therefore, while the above-mentioned chemical reaction has occurred, it becomes the important point to give the mixed hair coloring agent quickly to homogeneity to hair, when obtaining a good result.

[0003] Then, at the home, even if it is the case where an amateur performs hair coloring by the self, the hair coloring tools of dedication are sold by the above-mentioned hair coloring agent and the set so that it may be quick and a hair coloring agent can be given to homogeneity at hair.

[0004] As the above-mentioned hair coloring tools, as shown in drawing 8 , the brush hair 2 is implanted in seriate at one end face of the brush rest 1, and that by which the ctenidium-like bristle 3 was really formed in the other-end side by seriate is used widely.

[0005] In order to perform hair coloring using these hair coloring tools First, build line A with projection 4a prepared for root Motobe, a pedicel 4, to hair, and in one side of this line A, the seriate brush hair 2 so that that longitudinal direction may become parallel to line A That is, as it guesses so that the brush hair 2 may cross the direction where hair flows, and an arrow head shows, it repeats making it move in accordance with the flow of hair as it is 2 to 3 times, and a hair coloring agent is applied to the root side of hair. Moreover, the same activity is done also in the opposite side of line A. Next, the line is newly built in the location [A / above-mentioned line] shifted, and the same activity as the above is done. And after applying a hair coloring agent throughout the root side of hair, a pedicel 4 is reversed, it is a bristle 3, hair is combed lightly, the hair coloring agent applied to the root side is lengthened to a hair-ends side, and a hair coloring agent is made to die and cross to homogeneity shortly. Thus, hair coloring can be performed.

[Translation done.]

* NOTICES *

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.*** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

EFFECT OF THE INVENTION

[Effect of the Invention] as mentioned above, the hair coloring agent grant approach of this invention crosses the flow of hair to having moved conventionally the brush hair which the hair coloring agent attached in accordance with the flow of hair -- as -- order -- moving -- the width of face of the longitudinal direction of brush ***, and abbreviation -- the spreading field of every [the same width of face] and a hair coloring agent is formed. Therefore, it applies to the same place too much superfluously, partially, it dyes, it does not become a riser or does not become [it dyes without / deep / coverage being insufficient, and] remnants, and certainly and easily, a mixed cream can be applied by fixed width of face, and quick good hair coloring can be realized. [0027] And according to this invention, in order that brush hair may cross the flow of hair, resistance concerning brush hair becomes large compared with the case of the former to which brush hair meets the flow of hair, and has the advantage that the mixed cream held at brush hair is easy to be pushed in to the inside of hair.

[Translation done.]

*** NOTICES ***

JPO and NCIPJ are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] However, by the above-mentioned approach, in order to move the brush hair 2 in accordance with the flow of hair, it is hard to grasp to which point of hair the hair coloring agent was applied, and there is a problem that spreading of a hair coloring agent tends to become an ununiformity. Moreover, in order that resistance may not cut in the remainder to a motion of the brush hair 2, the problem of being hard to enter from a hair front face to the inside of hair also has the hair coloring agent applied with the brush hair 2.

[0007] This invention was made in view of such a situation, is easy actuation and sets quickly offer of the hair coloring agent grant approach which can give a hair coloring agent at homogeneity to hair as the purpose.

[Translation done.]

* NOTICES *

JPO and NCIP are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

MEANS

[Means for Solving the Problem] In order to attain the above-mentioned purpose, this invention is the approach of giving a hair coloring agent to hair using the brush hair implanted in seriate, first, builds the line to hair and sets it on the parting. The brush hair holding the above-mentioned hair coloring agent is applied to hair so that the longitudinal direction of brush **** may meet in the direction in which the hair in the above-mentioned line flows. Only the same width of face applies a hair coloring agent to hair. the flow of hair is crossed for brush hair in the condition -- as -- order -- moving -- the width of face of the longitudinal direction of brush ****, and abbreviation -- Build the new line in the location [field / where the above-mentioned hair coloring agent was applied] next shifted, and it sets on the parting. the field where the hair coloring agent was previously applied by performing hair coloring agent application actuation of a top Norikazu ream, and a clearance -- there is nothing -- the width of face of the longitudinal direction of brush ****, and abbreviation -- only the same width of face applies a hair coloring agent to hair, and let hereafter the hair coloring agent grant approach which repeats the same actuation be the 1st summary.

[0009] Moreover, let that to which hair coloring agent grant is especially performed to the root of the canities extended newly also in the above-mentioned hair coloring agent grant approach be the 2nd summary.

[0010]

[Embodiment of the Invention] Below, the gestalt of operation of this invention is explained.

[0011] Drawing 1 is the hair coloring set of a lot used for the gestalt of 1 operation of this invention, and these are sold by the bundle as goods of a home hair coloring agent. In drawing, the hair coloring agent put into 10 by the tube container with respectively separate the 1st agent and the 2nd agent and 11 are the trays made from plastics for mixing the above-mentioned hair coloring agent 10. Moreover, 12 is the hair coloring tools of dedication, the brush hair 14 is implanted in end face of one of the two seriate, and the bristle 15 is really formed in the end face of the opposite side seriate. 13 is a vinyl glove.

[0012] In this invention, hair coloring to a part for root Motobe of the canities extended newly can be performed by giving a hair coloring agent as follows to hair, using the above-mentioned hair coloring set. That is, first, as shown in drawing 2, the 1st agent of the hair coloring agent 10 and the 2nd agent are pressed out tales doses every on a tray 11. And a glove 13 is put, and after stopping a wrist with a rubber band so that it may not separate, as shown in drawing 3, it often mixes with the brush hair 14 of the hair coloring tools 12.

[0013] And it applies to hair root Motobe to whom the hair coloring agent (henceforth "a mixed cream") mixed within the tray 11 is taken in the brush hair 14 of the hair coloring tools 12, a hairline is newly extended in it, and canities is conspicuous in it. Next, the above-mentioned mixed cream is applied to root Motobe of the both sides with the brush hair 14 of the hair coloring tools 12 in order focusing on the line in order on the backside [the forelock -> both side -> head], building the line to hair.

[0014] If spreading of the mixed cream to the above-mentioned line is explained in more detail, as shown in drawing 4 (a), line A will be first built to hair using the projection 16 prepared in the point of the shank of the hair coloring tools 12. Next, as shown in this drawing (b), in the above-mentioned line A, the brush hair 14 of the hair coloring tools 12 is applied to hair so that it may meet in the direction in which the hair to which the longitudinal direction of the brush **** extends from line A flows, in the condition, the brush hair 14 is moved forward and backward so that the flow of hair may be crossed, and a mixed cream is applied to root Motobe of line A.

[0015] And as shown in drawing 5, spreading of the mixed cream to root Motobe of the above-mentioned line A presses down first the hair prolonged in one side from line A by hand of one of the two, to the hair of the one side, repeats the brush hair 14 from back 2 or 3 times from before and before to back, moves it, and when only the width of face of the longitudinal direction of brush **** gives a mixed cream to hair, it is performed. Thus, P

shows the obtained spreading field. Next, the hair prolonged in the opposite side of the above-mentioned line A is pressed down by hand, the brush hair 14 is similarly moved to this part, and the spreading field Q is obtained. In addition, in spreading actuation of the above-mentioned mixed cream, in order to apply a mixed cream to homogeneous line width, it is important to press down firmly so that the flow of hair may not be confused. [0016] below, it is shown in drawing 6 -- as -- the width of face of the longitudinal direction of the above-mentioned brush ****, and abbreviation -- the new spreading fields R and S are obtained by building new line A' in the location where only the same die length shifted, and performing the same actuation as the above. In addition, in above-mentioned line A', since the inside part of the spreading field R is a side front part of the spreading field Q formed previously, by shifting the line to A[from A] ' shows that spreading from the side front of hair and spreading from a background can be performed now one by one.

[0017] thus, the width of face of the longitudinal direction of brush **** and abbreviation -- a mixed cream is applied shifting and building every [the same die length] and the line, and a mixed cream is given to root Motobe of the whole hair. And the mixed cream given to root Motobe is lightly lengthened toward hair ends by reversing the pedicel of the hair coloring tools 12, applying a bristle 15 to the head shortly and combing hair. And like the conventional hair coloring after predetermined time progress, a hair coloring agent is flushed, it dries and hair coloring is ended.

[0018] To having moved the brush hair 14 of the hair coloring tools 12 in accordance with the flow of hair conventionally, it moves forward and backward so that the flow of hair may be crossed, and he is trying to form the spreading field of every [of the longitudinal direction of brush **** / width of face], and a mixed cream according to the above-mentioned hair coloring approach. Therefore, it applies to the same place too much superfluously, partially, it dyes, it does not become a riser or does not become [it dyes without / deep / coverage being insufficient, and] remnants, and certainly and easily, a mixed cream can be applied by fixed width of face, and quick good hair coloring can be realized. And in order that the brush hair 14 may cross the flow of hair, resistance concerning the brush hair 14 is strong, and has the advantage that the mixed cream held at the brush hair 14 is easy to be pushed in to the inside of hair.

[0019] In addition, although the 2 agent mixing type hair coloring agent 10 is used in the above-mentioned example, no matter the class of hair coloring agent 10 may be what thing, there is no inconvenience. And a tray 11 and the glove 13 of what kind of thing is combined how are also arbitrary.

[0020] Moreover, although the hair coloring tools 12 which formed the brush hair 14 and a bristle 15 in the both sides of a pedicel are used in the above-mentioned example, a mixed cream is applied using the hair coloring brush which has only not only this but the brush hair 14, and you may make it lengthen a mixed cream to the whole hair using the hair coloring comb which has only a bristle 15.

[0021] However, it is suitable to use the hair coloring tools 12 with which the brush hair 14 and a bristle 15 were formed in one like the above-mentioned example in respect of user-friendliness. As shown in drawing 7 , especially And the plane view abbreviation triangle-like brush rest 20, Side 20b in which it is the hair coloring tools 12 equipped with the pedicel 21 prolonged in the shape of a narrow width from one-side section 20a of this brush rest 20, and the brush hair 14 of the above-mentioned brush rest 20 was formed, It is especially suitable to use what was set up so that the direction where the imaginary line 22 which bisects the angle theta which consists of side 20c in which the bristle 15 was formed is prolonged might carry out abbreviation coincidence with the direction where the above-mentioned pedicel 21 is prolonged.

[0022] That is, since the include angle which the brush **** tip to a pedicel 21 makes, and the include angle which the bristle train tip to a pedicel 21 makes become the same according to the hair coloring tools 12 shown in above-mentioned drawing 7 , also when a pedicel 21 is grasped and the brush hair 14 is applied to a head, and also when a bristle 15 is applied, it is not necessary to change the include angle of the pedicel 21 to a head, and it can work, maintaining the same include angle consistently. Therefore, a pedicel 21 is not moved unconsciously and it has the advantage that a hair coloring activity can be done stably.

[0023] In addition, although the die length of the brush hair 14 and a bristle 15, the width of face of the longitudinal direction of a train, etc. can be set up suitably, it is suitable for them to carry out width of face of the longitudinal direction of brush **** before and after 3cm especially also in 2.5-4cm. That is, since it is hard to move where the brush hair 14 whole is put in this invention to hair, when brush **** exceeded 4cm, in order to cross the flow of hair and to move the brush hair 14 forward and backward, and it is hard to meet the curve of the head, it is not desirable. On the contrary, if brush **** is shorter than 2.5cm, since the spreading field of a mixed cream is formed for every width of face of this, it becomes complicated and is not desirable [that time and effort]. Moreover, although the hair dyeing for root Motobe of the canities extended newly (the so-called

“retouch”) is important in order to dye canities by itself, it is usually in the condition (from the last hair coloring to generally [although there is individual difference] one month after) that 1-1.5cm canities has been extended that canities begins to be conspicuous. It is difficult to be connected with the place dyed last time and to dye it it finely, if only 1-1.5cm only of canities parts extended newly is dyed, although this is dyed. Then, it can always dye beautifully in a fixed color by covering the part dyed last time and applying a mixed cream to feeling. It is suitable to set up brush hair queue length before and after 3cm also from this.

[0024] Moreover, although the above-mentioned example is an example which applied this invention to retouch, it is applicable to the whole dyeing which dyes not only this but the whole hair. However, like the above-mentioned example, applying to retouch has the high improvement effectiveness in effectiveness of an activity, and it is suitable.

[0025] And the above-mentioned example applies this invention, when performing hair coloring at home using hair coloring agent goods, but even if it applies this invention to the hair coloring not only in the hair coloring in a home but a beauty shop etc., there is no inconvenience.

[0026]

[Translation done.]

* NOTICES *

JPO and NCIP are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.*** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the explanatory view showing the configuration of the hair coloring set used for one example of this invention.

[Drawing 2] It is the explanatory view showing the procedure of the above-mentioned example.

[Drawing 3] It is the explanatory view showing the procedure of the above-mentioned example.

[Drawing 4] Both (a) and (b) are the explanatory views showing the procedure of the above-mentioned example.

[Drawing 5] In the above-mentioned example, it is the detailed explanatory view of the method of application of a mixed cream.

[Drawing 6] In the above-mentioned example, it is the detailed explanatory view of the method of application of a mixed cream.

[Drawing 7] It is the explanatory view of the hair coloring tools used for the above-mentioned example.

[Drawing 8] It is the explanatory view of the hair coloring agent grant approach in the conventional hair coloring.

[Description of Notations]

14 Brush Hair

A Line

[Translation done.]

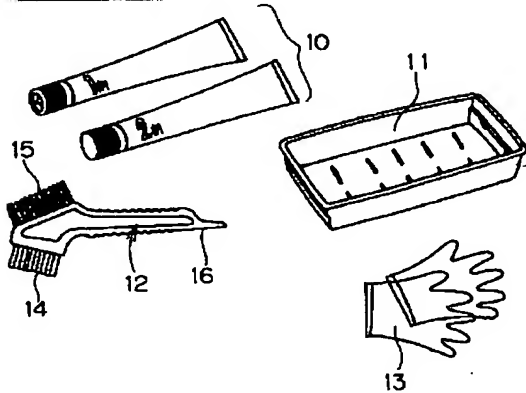
* NOTICES *

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

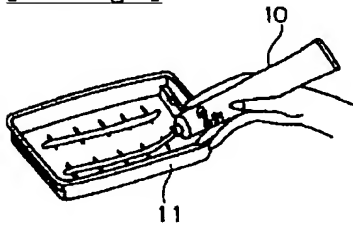
- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

DRAWINGS

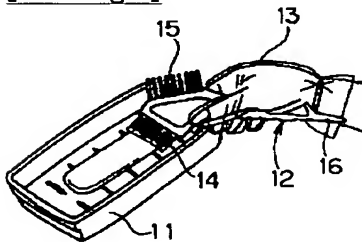
[Drawing 1]



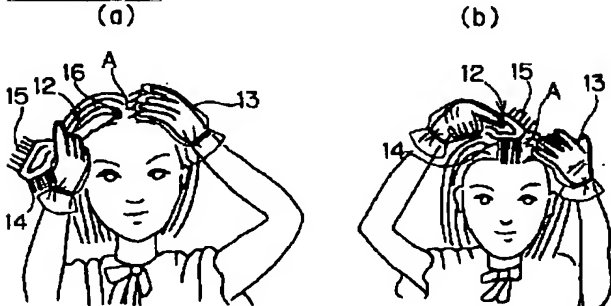
[Drawing 2]



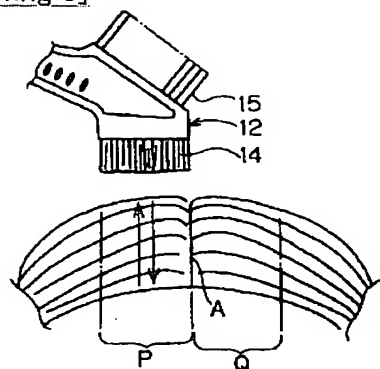
[Drawing 3]



[Drawing 4]

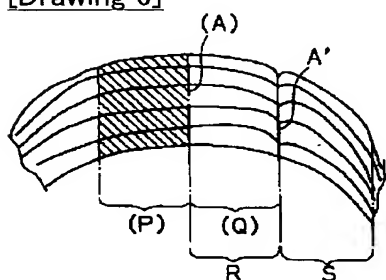


[Drawing 5]

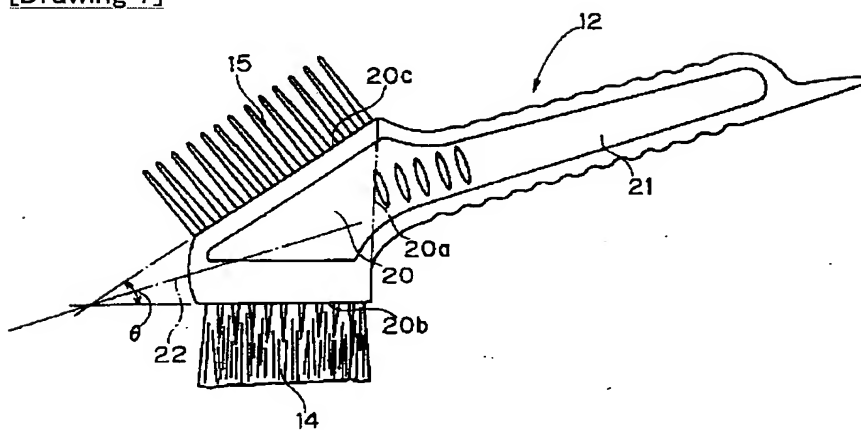


14:ブラシ毛
A:分け目

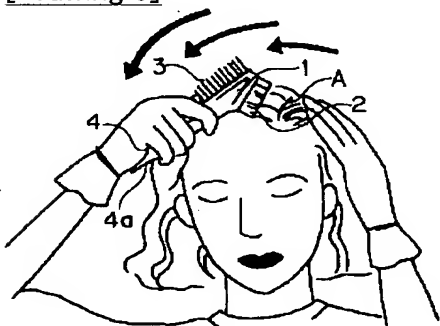
[Drawing 6]



[Drawing 7]



[Drawing 8]



[Translation done.]

(19) 日本国特許庁 (J P)

(12) 公開特許公報 (A)

(11) 特許出願公開番号

特開2000-201722

(P2000-201722A)

(43) 公開日 平成12年7月25日 (2000.7.25)

(51) Int.Cl.⁷

A 4 5 D 19/00

識別記号

F I

A 4 5 D 19/00

テマコード* (参考)

B 3 B 0 4 0

審査請求 未請求 請求項の数 2 O L (全 6 頁)

(21) 出願番号 特願平11-8399

(22) 出願日 平成11年1月14日 (1999.1.14)

(71) 出願人 000000952

鎗紡株式会社

東京都墨田区墨田五丁目17番4号

(72) 発明者 滝澤 三良

東京都港区海岸3丁目20番20号 鎗紡株式会社内

(72) 発明者 濱田 知実

東京都港区海岸3丁目20番20号 鎗紡株式会社内

(74) 代理人 100079382

弁理士 西藤 征彦

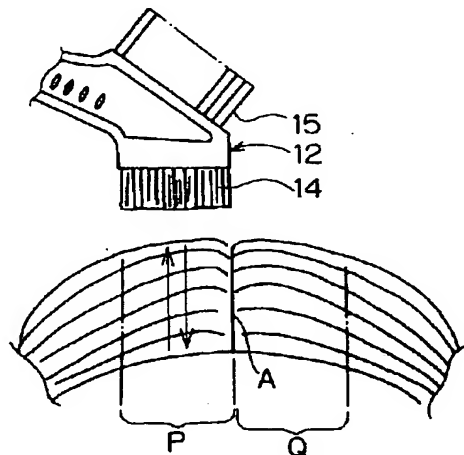
最終頁に続く

(54) 【発明の名称】 毛染め剤付与方法

(57) 【要約】

【課題】 簡単な動作で、素早く、しかも均一に毛染め剤を毛髪に付与することのできる毛染め剤付与方法を提供する。

【解決手段】 まず、毛髪に分け目Aをつくり、その分け目Aにおいて、毛染め剤を保持したブラシ毛14を、ブラシ毛列の長手方向が上記分け目Aにおける毛髪の流れる方向に沿うよう毛髪に当て、その状態でブラシ毛14を、毛髪の流れを横切るように前後に動かしてブラシ毛列の長手方向の幅と略同じ幅だけ毛髪に毛染め剤を塗布し、つぎに、上記毛染め剤が塗布された領域からずれた位置で新たな分け目をつくり、その分け目において、上記一連の毛染め剤塗布動作を行うことにより、先に毛染め剤が塗布された領域と隙間なく、ブラシ毛列の長手方向の幅だけ毛髪に毛染め剤を塗布し、以下、同様の動作を繰り返す。



14: ブラシ毛
A: 分け目

【特許請求の範囲】

【請求項1】 列状に植設されたブラシ毛を用いて毛髪に毛染め剤を付与する方法であって、まず、毛髪に分け目をつくり、その分け目において、上記毛染め剤を保持したブラシ毛を、ブラシ毛列の長手方向が上記分け目における毛髪の流れる方向に沿うよう毛髪に当て、その状態でブラシ毛を、毛髪の流れを横切るように前後に動かしてブラシ毛列の長手方向の幅と略同じ幅だけ毛髪に毛染め剤を塗布し、つぎに、上記毛染め剤が塗布された領域からずれた位置で新たな分け目をつくり、その分け目において、上記一連の毛染め剤塗布動作を行うことにより、先に毛染め剤が塗布された領域と隙間なく、ブラシ毛列の長手方向の幅と略同じ幅だけ毛髪に毛染め剤を塗布し、以下、同様の動作を繰り返すことを特徴とする毛染め剤付与方法。

【請求項2】 上記毛染め剤付与が、新しく伸びた白髪の根元に対し行われるものである請求項1記載の毛染め剤付与方法。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】本発明は、白髪染め等を目的として毛髪に毛染め剤を付与する方法に関するものである。

【0002】

【従来の技術】従来から、ペースト状の毛染め剤を用いて毛髪を染めることが、美容院や家庭において行われている。上記毛染め剤としては、通常、第1剤と第2剤からなる2剤混合タイプのものが用いられており、この2つの剤を、使用直前に混合し、その化学反応により毛髪を染めるようになっている。したがって、上記化学反応が生起している間に、混合された毛染め剤を、毛髪に手早く、しかも均一に付与することが、良好な仕上がりを得る上で、重要なポイントとなる。

【0003】そこで、家庭において、素人がセルフで毛染めを行なう場合であっても、毛染め剤を手早く、均一に毛髪に付与することができるよう、専用の毛染め用具が、上記毛染め剤とセットで販売されている。

【0004】上記毛染め用具としては、図8に示すように、ブラシ台部1の一方の端面に、ブラシ毛2が列状に植設され、他方の端面に、櫛歯状のブリッスル3が列状に一体形成されたものが汎用されている。

【0005】この毛染め用具を用いて毛染めを行なうには、まず、柄部4の根元部に設けられた突起4aで、毛髪に分け目Aをつくり、この分け目Aの片側に、列状のブラシ毛2を、その長手方向が分け目Aと平行になるように、すなわちブラシ毛2が毛髪の流れる方向を横切るように当てて、矢印で示すように、そのまま毛髪の流れに沿って移動させることを2～3回繰り返して、毛髪の根元側に、毛染め剤を塗布する。また、分け目Aの反対側においても、同様の作業を行なう。つぎに、上記分け

目Aからずれた位置に新たに分け目をつくり、上記と同様の作業を行なう。そして、毛髪の根元側全域に毛染め剤を塗布したのち、今度は、柄部4を反転させて、ブリッスル3で、毛髪を軽く梳かし、根元側に塗布された毛染め剤を毛先側に伸ばし、毛染め剤を均一にゆきわたらせる。このようにして、毛染めを行なうことができる。

【0006】

【発明が解決しようとする課題】しかしながら、上記の方法では、毛髪の流れに沿ってブラシ毛2を移動させるため、毛髪のどの地点まで毛染め剤を塗布したのかを把握しにくく、毛染め剤の塗布が不均一になりやすいという問題がある。また、ブラシ毛2の動きに抵抗があまりかからないため、ブラシ毛2で塗布される毛染め剤が、毛髪表面から毛髪の内側まで入り込みにくいという問題もある。

【0007】本発明は、このような事情に鑑みなされたもので、簡単な動作で、素早く、しかも均一に毛染め剤を毛髪に付与することのできる毛染め剤付与方法の提供をその目的とする。

【0008】

【課題を解決するための手段】上記の目的を達成するため、本発明は、列状に植設されたブラシ毛を用いて毛髪に毛染め剤を付与する方法であって、まず、毛髪に分け目をつくり、その分け目において、上記毛染め剤を保持したブラシ毛を、ブラシ毛列の長手方向が上記分け目における毛髪の流れる方向に沿うよう毛髪に当て、その状態でブラシ毛を、毛髪の流れを横切るように前後に動かしてブラシ毛列の長手方向の幅と略同じ幅だけ毛髪に毛染め剤を塗布し、つぎに、上記毛染め剤が塗布された領域からずれた位置で新たな分け目をつくり、その分け目において、上記一連の毛染め剤塗布動作を行うことにより、先に毛染め剤が塗布された領域と隙間なく、ブラシ毛列の長手方向の幅と略同じ幅だけ毛髪に毛染め剤を塗布し、以下、同様の動作を繰り返す毛染め剤付与方法を第1の要旨とする。

【0009】また、上記毛染め剤付与方法のなかでも、特に、毛染め剤付与が、新しく伸びた白髪の根元に対し行われるものを第2の要旨とする。

【0010】

【発明の実施の形態】つぎに、本発明の実施の形態について説明する。

【0011】図1は、本発明の一実施の形態に用いる一組の毛染めセットで、これらは、家庭用毛染め剤の商品として、一まとまりで販売されている。図において、10は、第1剤と第2剤とがそれぞれ別々のチューブ容器に入れられた毛染め剤、11は、上記毛染め剤10を混合するためのプラスチック製トレイである。また、12は専用の毛染め用具で、片方の端面にブラシ毛14が列状に植設され、反対側の端面にブリッスル15が列状に一体形成されている。13はビニール手袋である。

【0012】本発明では、上記毛染めセットを用い、例えばつぎのようにして、毛染め剤を毛髪に付与することにより、新しく伸びた白髪の根元部分に対する毛染めを行なうことができる。すなわち、まず、図2に示すように、毛染め剤10の第1剤と第2剤とを、トレイ11に、同量ずつ絞り出す。そして、手袋13をはめて、はずれないよう手首を輪ゴムで止めたのち、図3に示すように、毛染め用具12のブラシ毛14でよく混ぜ合わせる。

【0013】そして、毛染め用具12のブラシ毛14に、トレイ11内で混合された毛染め剤（以下「混合クリーム」という）をとり、生え際の、新しく伸びて白髪が目立つ毛髪根元に塗布する。つぎに、前髪→両サイド→頭の後側の順で、毛髪に分け目をつくりながら、その分け目を中心にして、その両側の根元に、順に、毛染め用具12のブラシ毛14で、上記混合クリームを塗布していく。

【0014】上記分け目への混合クリームの塗布をより詳しく説明すると、まず、図4(a)に示すように、毛染め用具12の柄の先に設けられた突起16を利用して、毛髪に分け目Aをつくる。つぎに、同図(b)に示すように、上記分け目Aにおいて、毛染め用具12のブラシ毛14を、そのブラシ毛列の長手方向が、分け目Aから延びる毛髪の流れる方向に沿うよう毛髪に当て、その状態でブラシ毛14を、毛髪の流れを横切るように前後に動かして、分け目Aの根元に混合クリームを塗布する。

【0015】そして、上記分け目Aの根元部への混合クリームの塗布は、図5に示すように、まず、分け目Aから片側に延びる毛髪を片方の手で押さえ、その片側の毛髪に対し、ブラシ毛14を後ろから前、前から後ろへと2、3回繰り返して動かして、ブラシ毛列の長手方向の幅だけ、毛髪に混合クリームを付与することによって行なわれる。このようにして得られた塗布領域をPで示す。つぎに、上記分け目Aの反対側に延びる毛髪を手で押さえ、この部分に対し、ブラシ毛14を同様に動かして、塗布領域Qを得る。なお、上記混合クリームの塗布動作において、混合クリームを均一に塗布するには、毛髪の流れが乱れないようしっかりと押さえることが重要である。

【0016】つぎに、図6に示すように、上記ブラシ毛列の長手方向の幅と略同じ長さだけずれた位置に新たな分け目A'をつくり、上記と同様の動作を行なうことにより、新たな塗布領域R、Sを得る。なお、上記分け目A'において、塗布領域Rの内側部分は、先に形成された塗布領域Qの表側部分であることから、分け目をAからA'にずらすことにより、毛髪の表側からの塗布と、裏側からの塗布を、順次、行なうことができるようになっていることがわかる。

【0017】このようにして、ブラシ毛列の長手方向の

幅と略同じ長さずつ、分け目をずらしてつくりながら混合クリームを塗布し、毛髪全体の根元部に混合クリームを付与する。そして、毛染め用具12の柄部を反転させ、今度は頭にブリッスル15を当てて毛髪を梳かすことにより、根元部に付与された混合クリームを、毛先に向かって軽く伸ばす。そして、所定時間経過後、従来の毛染めと同様にして、毛染め剤を洗い流し、乾燥して、毛染めを終了する。

【0018】上記毛染め方法によれば、毛染め用具12のブラシ毛14を、従来、毛髪の流れに沿って動かしていたのに対し、毛髪の流れを横切るように前後に動かして、ブラシ毛列の長手方向の幅ずつ、混合クリームの塗布領域を形成するようにしている。したがって、同じところに過剰に塗布しすぎて部分的に濃い染め上がりになったり、塗布量が足らずに染め残しになったりすることがなく、確実かつ簡単に、一定の幅で混合クリームを塗布していくことができ、手早く良好な毛染めを実現することができる。しかも、ブラシ毛14が毛髪の流れを横切るため、ブラシ毛14にかかる抵抗が大きく、ブラシ毛14に保持された混合クリームが毛髪の内側まで押し込まれやすいという利点を有する。

【0019】なお、上記の例では、2剤混合タイプの毛染め剤10を用いているが、毛染め剤10の種類は、どのようなものであっても差し支えはない。そして、トレイ11、手袋13も、どのようなものをどのように組み合わせるかは任意である。

【0020】また、上記の例では、ブラシ毛14とブリッスル15を柄部の両側に形成した毛染め用具12を用いているが、これに限らず、例えばブラシ毛14のみを有する毛染めブラシを用いて混合クリームの塗布を行い、ブリッスル15のみを有する毛染めコームを用いて混合クリームを毛髪全体に伸ばすようにしてもよい。

【0021】ただし、使い勝手の点で、上記の例のように、ブラシ毛14とブリッスル15が一体的に設けられた毛染め用具12を用いることが好適である。そして、なかでも、図7に示すように、平面視略三角形形状のブラシ台部20と、このブラシ台部20の一辺部20aから細幅状に延びる柄部21とを備えた毛染め用具12であって、上記ブラシ台部20の、ブラシ毛14が形成された辺20bと、ブリッスル15が形成された辺20cとからなる角θを二等分する仮想線22の延びる方向が、上記柄部21の延びる方向と略一致するよう設定されたものを用いることが、特に好適である。

【0022】すなわち、上記図7に示す毛染め用具12によれば、柄部21に対するブラシ毛列先端のなす角度と、柄部21に対するブリッスル列先端のなす角度が同一になるため、柄部21を握って頭部にブラシ毛14を当てた場合も、ブリッスル15を当てた場合も、頭部に対する柄部21の角度を変更する必要がなく、一貫して同一角度を保ちながら作業することができる。したがっ

て、柄部 21 をふらふら動かすことができなく、毛染め作業を安定的に行なうことができるという利点を有する。

【0023】なお、ブラシ毛 14、ブリッスル 15 の長さ、列の長手方向の幅等は、適宜に設定することができるが、特に、ブラシ毛列の長手方向の幅を、2.5～4 cm、なかでも 3 cm 前後にすることが好適である。すなわち、本発明では、ブラシ毛 14 を、毛髪の流れを横切って前後に動かすため、ブラシ毛列が 4 cm を超えると、ブラシ毛 14 全体を毛髪に当てた状態で動かすにくく、また頭のカーブにも沿いにくいため好ましくない。逆に、ブラシ毛列が 2.5 cm より短いと、この幅ごとに混合クリームの塗布領域を形成していくことから、その手間が煩雑になり好ましくない。また、自分で白髪を染めるには、新しく伸びた白髪の根元部分の染毛（いわゆる「リタッチ」）が重要であるが、白髪が目立ち始めるのが、通常、1～1.5 cm 白髪が伸びてきた状態（個人差があるが、前回の毛染めから大体 1 カ月後）である。これを染めるのに、新しく伸びてきた白髪部分 1～1.5 cm だけ染めると、前回染めたところとつながってきれいに染めることが困難である。そこで、前回染めた部分にかぶせ気味に混合クリームを塗布することで、常に一定の色で美しく染めることができる。このことから、ブラシ毛列の長さを、3 cm 前後に設定することが好適である。

【0024】また、上記の例は、本発明を、リタッチに適用した例であるが、これに限らず、毛髪全体を染める全体染めに適用することができる。ただし、上記の例のように、リタッチに適用することが、作業の効率向上効果が高く、好適である。

【0025】そして、上記の例は、本発明を、毛染め剤商品を用いて家庭で毛染めを行なう場合に適用したものであるが、本発明は、家庭での毛染めに限らず、美容院等における毛染めに適用しても差し支えない。

【0026】

*

*【発明の効果】以上のように、本発明の毛染め剤付与方法は、毛染め剤のついたブラシ毛を、従来、毛髪の流れに沿って動かしていたのに対し、毛髪の流れを横切るように前後に動かして、ブラシ毛列の長手方向の幅と略同じ幅ずつ、毛染め剤の塗布領域を形成するようにしたものである。したがって、同じところに過剰に塗布しすぎて部分的に濃い染め上がりになったり、塗布量が不足に染め残しになったりすることがなく、確実かつ簡単に、一定の幅で混合クリームを塗布していくことができ、手早く良好な毛染めを実現することができる。

【0027】しかも、本発明によれば、ブラシ毛が毛髪の流れを横切るため、ブラシ毛にかかる抵抗が、ブラシ毛が毛髪の流れに沿う従来の場合に比べて大きくなり、ブラシ毛に保持された混合クリームが毛髪の内側まで押し込まれやすいという利点を有する。

【図面の簡単な説明】

【図 1】本発明の一実施例に用いる毛染めセットの構成を示す説明図である。

【図 2】上記実施例の手順を示す説明図である。

20 【図 3】上記実施例の手順を示す説明図である。

【図 4】(a)、(b) はともに上記実施例の手順を示す説明図である。

【図 5】上記実施例において、混合クリームの塗布方法の詳細な説明図である。

【図 6】上記実施例において、混合クリームの塗布方法の詳細な説明図である。

【図 7】上記実施例に用いる毛染め用具の説明図である。

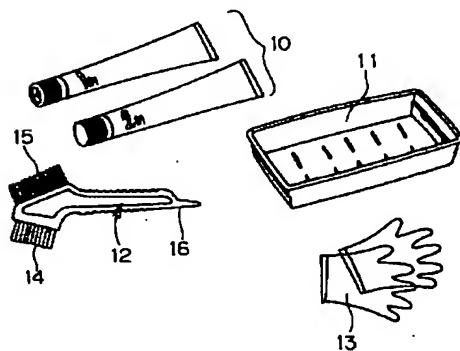
【図 8】従来の毛染めにおける毛染め剤付与方法の説明図である。

【符号の説明】

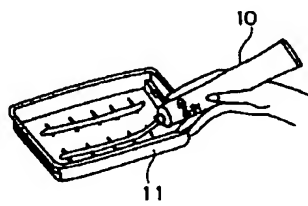
14 ブラシ毛

A 分け目

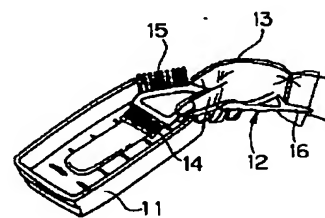
【図 1】



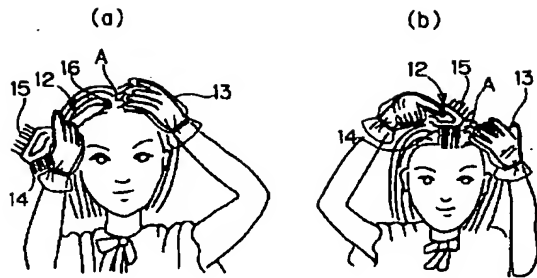
【図 2】



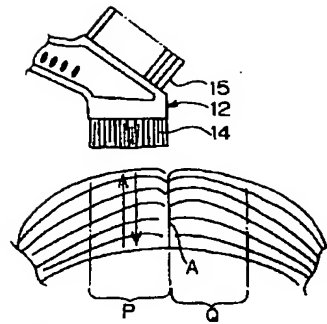
【図 3】



【図4】

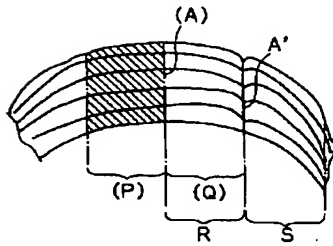


【図5】

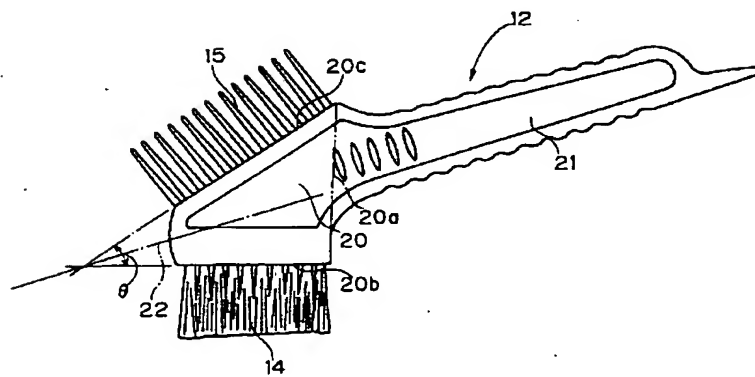


14:ブラシ毛
A:分け目

【図6】



【図7】



【図8】



フロントページの続き

(72)発明者 二川 佳子
東京都港区海岸3丁目20番20号 鐘紡株式
会社内

(72)発明者 三輪 さわか
東京都港区海岸3丁目20番20号 鐘紡株式
会社内

(6)

特開2000-201722

Fターム(参考) 3B040 AE08 AE09

This Page is inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☒ BLACK BORDERS
- ☒ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☒ FADED TEXT OR DRAWING
- ☐ BLURED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☒ COLORED OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REPERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images
problems checked, please do not report the
problems to the IFW Image Problem Mailbox**